

We claim:

1. A method for treating a hormone associated condition in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating a hormone associated condition in the subject.  
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2. The method of claim 1, wherein the hormone associated condition is endometriosis.  
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3. The method of claim 1, wherein the hormone associated condition is ovarian cancer.  
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4. The method of claim 1, wherein the hormone associated condition is breast cancer.  
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5. The method of claim 1, wherein the hormone associated condition is polycystic ovary syndrome.  
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6. The method of claim 1, wherein the hormone associated condition is uterine leiomata.  
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7. The method of claim 1, wherein the hormone associated condition is dysfunctional uterine bleeding.  
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8. The method of claim 1, wherein the hormone associated condition is premenstrual syndrome.  
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9. The method of claim 1, wherein the hormone associated condition is vaginal bleeding.  
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10. The method of claim 1, wherein the hormone associated condition is uterine fibroids.  
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11. The method of claim 1, wherein the subject is a mammal.  
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12. The method of claim 1, wherein the subject is a human.

13. The method of claim 1, wherein the LHRH antagonist has an ED<sub>50</sub> for histamine release in a standard *in vitro* histamine release assay of at least 3 µg/ml.

5 14. The method of claim 1, wherein the LHRH antagonist has an ED<sub>50</sub> for histamine release in a standard *in vitro* histamine release assay of at least 5 µg/ml.

15. The method of claim 1, wherein the LHRH antagonist has an ED<sub>50</sub> for histamine release in a standard *in vitro* histamine release assay of at least 10 µg/ml.

10 16. The method of claim 1, wherein the LHRH antagonist is a decapeptide or a nonapeptide compound having a D- asparagine, an L-asparagine, a D-glutamine, or an L-glutamine at a position corresponding to position 6 of naturally occurring LHRH, or a pharmaceutically acceptable salt thereof.

15 17. The method of claim 16, wherein the LHRH antagonist is a decapeptide.

18. The method of claim 16, wherein the LHRH antagonist is a nonapeptide.

19. The method of claim 1, wherein the LHRH antagonist is a peptide  
20 compound comprising a structure:

A-B-C-D-E-F-G-H-I-J

wherein

25 A is pyro-Glu, Ac-D-Nal , Ac- D-Qal, Ac-Sar, or Ac- D-Pal, or an analogue thereof;

B is His or 4-Cl- D-Phe, or an analogue thereof;

C is Trp, D-Pal, D-Nal, L-Nal- D-Pal(N-O), or D-Trp, or an analogue thereof;

D is Ser, or an analogue thereof;

30 E is N-Me-Ala, Tyr, N-Me-Tyr, Ser, Lys(iPr), 4-Cl-Phe, His, Asn, Met, Ala, Arg or Ile, or an analogue thereof;

F is D-Asn or D-Gln;

G is Leu or Trp, or an analogue thereof;

H is Lys(iPr), Gln, Met, or Arg, or an analogue thereof;

I is Pro, or an analogue thereof; and

35 J is Gly-NH<sub>2</sub> or D-Ala-NH<sub>2</sub>, or an analogue thereof;  
or a pharmaceutically acceptable salt thereof.

20. The method of claim 1, wherein the LHRH antagonist is a peptide compound comprising a structure:

A-B-C-D-E-F-G-H-I-J

5 wherein

A is pyro-Glu, Ac-D-Nal, Ac-D-Qal, Ac-Sar, or Ac-D-Pal, or an analogue thereof;

B is His or 4-Cl-D-Phe, or an analogue thereof;

C is Trp, D-Pal, D-Nal, L-Nal-D-Pal(N-O), or Trp, or an analogue thereof;

10 D is Ser, or an analogue thereof;

E is N-Me-Ala, Tyr, N-Me-Tyr, Ser, Lys(iPr), 4-Cl-Phe, His, Asn, Met, Ala, Arg or Ile, or an analogue thereof;

F is D-Asn;

G is Leu or Trp, or an analogue thereof;

15 H is Lys(iPr), Gln, Met, or Arg, or an analogue thereof;

I is Pro, or an analogue thereof; and

J is Gly-NH<sub>2</sub> or D-Ala-NH<sub>2</sub>, or an analogue thereof; or a pharmaceutically acceptable salt thereof.

20 21. The method of claim 1, wherein the LHRH antagonist is a peptide compound comprising a structure:

Ac-D-Nal-4-Cl-D-Phe-D-Pal-Ser-N-Me-Tyr-D-Asn-Leu-Lys(iPr)-Pro-D-Ala-NH<sub>2</sub>; or a pharmaceutically acceptable salt thereof.

25 22. The method of claim 1, wherein the LHRH antagonist is a peptide compound comprising a structure:

Ac-D-Nal-4-Cl-D-Phe-D-Pal-Ser-Tyr-D-Asn-Leu-Lys(iPr)-Pro-D-Ala-NH<sub>2</sub>; or a pharmaceutically acceptable salt thereof.

30 23. The method of claim 1, wherein the selective estrogen receptor modulator is raloxifene.

24. The method of claim 1, wherein the selective estrogen receptor modulator is tamoxifen.

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25. The method of claim 1, wherein the LHRH antagonist and the selective estrogen receptor modulator are administered to the subject using a sustained-release formulation.

26. The method of claim 25, wherein the sustained-release formulation of LHRH antagonist comprises a solid ionic complex of an LHRH antagonist and a carrier macromolecule, wherein the carrier and LHRH antagonist used to form the complex are 5 combined at a weight ratio of carrier:antagonist of 0.5:1 to 0.1:1.

27. The method of claim 1, wherein the LHRH antagonist and the selective estrogen receptor modulator are administered at a dosage of about 5-500 µg/kg/day.

10 28. The method of claim 1, wherein the LHRH antagonist and the selective estrogen receptor modulator are administered at a dosage of about 10-400 µg/kg/day.

15 29. The method of claim 1, wherein the LHRH antagonist and the selective estrogen receptor modulator are administered at a dosage of about 10-100 µg/kg/day.

30. The method of claim 1, wherein the LHRH antagonist and the selective estrogen receptor modulator are administered to the subject simultaneously.

20 31. The method of claim 1, wherein the LHRH antagonist and the selective estrogen receptor modulator are administered to the subject at different times.

32. The method of claim 1, wherein the LHRH antagonist and the selective estrogen receptor modulator are administered to the subject in the same formulation.

25 33. The method of claim 1, wherein the LHRH antagonist and the selective estrogen receptor modulator are administered to the subject in separate formulations.

30 34. A method for treating endometriosis in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating endometriosis in the subject.

35 35. A method for treating ovarian cancer in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating ovarian cancer in the subject.

36. A method for treating breast cancer in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating breast cancer in the subject.

37. A method for treating polycystic ovary syndrome in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating polycystic ovary syndrome in the subject.

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38. A method for treating uterine leiomata in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating uterine leiomata in the subject.

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39. A method for treating dysfunctional uterine bleeding in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating dysfunctional uterine bleeding in the subject.

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40. A method for treating premenstrual syndrome in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating premenstrual syndrome in the subject.

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41. A method for treating vaginal bleeding in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating vaginal bleeding in the subject.

42. The method of claim 41, wherein the vaginal bleeding is due to thrombocytopenia.

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43. The method of claim 42, wherein the thrombocytopenia is caused by chemotherapy treatment.

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44. The method of claim 41, wherein the subject is suffering from a

proliferative disorder.

45. The method of claim 44, wherein the proliferative disorder is acute myeloid leukemia.

46. A method for treating uterine fibroids in a subject, comprising administering to a subject a combination of an LHRH antagonist and a selective estrogen receptor modulator, thereby treating uterine fibroids in the subject.